## AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES
## MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS

1.  (Currently amended)  A control method for controlling a speed of a movable
    machine element of a numerically controlled industrial processing machine
    with jerk limitation, comprising the steps of:

    decomposing a travel path of the movable machine element into a
    plurality of sequentially arranged, interpolatable travel sections;

    determining jerk profiles for the interpolatable travel sections; and

    modifying the jerk profiles with a parameter-dependent shape function
    obtained by adding a rectangular shape function and a Dirac shape function,
    with the modified jerk profile in a corresponding travel section providing a
    filter action represented by a bandpass filter ~~filters~~ having at least one
    blocking frequency ~~frequencies~~,

    wherein the rectangular shape function and the Dirac shape function
    are each adjusted with a respective parameter, so that the at least one
    blocking frequency ~~frequencies~~ of the bandpass filter corresponds ~~filters~~
    ~~correspond~~ substantially to a characteristic frequency ~~frequencies~~ of the
    machine element.

2.  (Currently amended)  The control method of claim 1, wherein the parameter-
    dependent shape function is defined by ~~at least~~ a plurality of parameters
    [[one parameter $\alpha_i$]].

3.  (Currently amended)  The control method of claim 1, wherein the parameter-
    dependent shape function is defined by a single parameter [[$\alpha$]].

4.  (Currently amended)  The control method of claim [[3]] 10, wherein the parameter-dependent shape function is obtained by adding [[a]] the rectangular shape function and [[a]] $\cos^2$ or $\sin^2$ shape function, with weighting between the rectangular and $\cos^2$ or $\sin^2$ shape functions performed by the single parameter.

5.  (Currently amended)  The control method of claim 3, wherein the parameter-dependent shape function is obtained by adding [[a]] the rectangular shape function and [[a]] the Dirac shape function, wherein weighting between the rectangular shape function and Dirac shape function is performed by the single parameter.

6.  (Original)  The control method of claim 1, wherein the shape of the jerk profile is modified by the parameter-dependent shape function so that an area of the jerk profile after the modification is identical to an area of the jerk profile before the modification, computed over an identical time interval.

7.  (Currently amended)  The control method of claim 1, and further comprising the steps of before executing a defined travel path of the movable machine element, determining rectangular jerk profiles optimized for the corresponding interpolatable travel sections, such that the blocking frequencies of the bandpass filters coincide essentially with the characteristic frequencies of the machine element, and then further ~~modifying~~ optimizing the previously optimized rectangular jerk profile with the parameter-dependent shape function.

8.  (Original)  The control method of claim 1, wherein the industrial processing machine comprises a machine selected from the group consisting of machine tool, production machine and robot.

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9.  (New)   A control method for controlling a speed of a movable machine element of a numerically controlled industrial processing machine with jerk limitation, comprising the steps of:

   decomposing a travel path of the movable machine element into a plurality of sequentially arranged, interpolatable travel sections;

   determining jerk profiles for the interpolatable travel sections; and

   modifying the jerk profiles with a parameter-dependent shape function obtained by adding a rectangular shape function and a $\cos^2$ or $\sin^2$ shape function, with the modified jerk profile in a corresponding travel section providing a filter action represented by a bandpass filter having at least one blocking frequency,

   wherein the rectangular shape function and the $\cos^2$ or $\sin^2$ shape function are each adjusted with a respective parameter, so that the at least one blocking frequency of the bandpass filter corresponds substantially to a characteristic frequency of the machine element.

10. (New)   The control method of claim 9, wherein the parameter-dependent shape function is defined by a single parameter.

11. (New)   The control method of claim 10, wherein the parameter-dependent shape function is obtained by adding the rectangular shape function and the $\cos^2$ or $\sin^2$ shape function, with weighting between the first and second shape functions performed by the single parameter.

12. (New)   The control method of claim 9, wherein the parameter-dependent shape function is defined by a plurality of parameters.

13. (New) The control method of claim 12, wherein the parameter-dependent shape function is formed by adding a plurality of rectangular shape functions and $\cos^2$ or $\sin^2$ shape functions, with each of the plurality of shape functions being weighted with a corresponding one of the plurality of parameters.

14. (New) The control method of claim 12, wherein the plurality of parameters are selected so as to define a plurality of blocking frequencies.

15. (New) The control method of claim 2, wherein the parameter-dependent shape function is formed by adding a plurality of rectangular shape functions and Dirac shape functions, with each of the plurality of shape functions being weighted with a corresponding one of the plurality of parameters.

16. (New) The control method of claim 2, wherein the plurality of parameters are selected so as to define a plurality of blocking frequencies.

17. (New) The control method of claim 15, and further adding weighted shape functions selected from the group consisting of $\cos^2$ or $\sin^2$ shape function, trapezoidal shape function, and triangular shape function.

18. (New) The control method of claim 13, and further adding weighted shape functions selected from the group consisting of Dirac shape function, trapezoidal shape function, and triangular shape function.

19. (New) The control method of claim 9, wherein the industrial processing machine comprises a machine selected from the group consisting of machine tool, production machine and robot.